West Virginia Department of Environmental Protection

Austin Caperton
Cabinet Secretary

Title V Operating Permit Revision

For Minor Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Action Number: MM02 **SIC:** 4953
Name of Permittee: LCS Services, Inc.
Facility Name/Location: North Mountain Sanitary Landfill
County: Berkeley
Permittee Mailing Address: P. O. Box 1070, Hedgesville, WV 25427

Description of Permit Revision: This modification incorporates the changes made in R13-2590B to increase the sulfur dioxide emission limit due to the increase in hydrogen sulfide concentration in the landfill gas (LFG).

Title V Permit Information:

Permit Number: R30-00300036-2016
Issued Date: January 21, 2016
Effective Date: February 4, 2016
Expiration Date: January 21, 2021

Directions To Facility: From I-81, take exit for State Route 9 (Berkeley Springs/Hedgesville); Go approximately 6 miles to Hedgesville and turn right onto County Route 901; Go approximately 1 mile, and take a left onto County Route 3/2 (Allensville Road); Go approximately 0.8 miles on Allensville Road and landfill entrance is on left.

THIS PERMIT REVISION IS ISSUED IN ACCORDANCE WITH THE WEST VIRGINIA AIR POLLUTION CONTROL ACT (W.VA. CODE §§ 22-5-1 ET SEQ.) AND 45CSR30 - "REQUIREMENTS FOR OPERATING PERMITS." THE PERMITTEE IDENTIFIED AT THE FACILITY ABOVE IS AUTHORIZED TO OPERATE THE STATIONARY SOURCES OF AIR POLLUTANTS IDENTIFIED HEREIN IN ACCORDANCE WITH ALL TERMS AND CONDITIONS OF THIS PERMIT.

Laura M. Crowder
Director, Division of Air Quality

September17, 2019
Date Issued

1.0 Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
001	E1	Active 67 Acre Landfill	1991	6,667,920 Mg	C1/C2
009A	009A	Leachate Pretreatment Tank	1991	100,000 gal	None
009B	009B	Leachate Pretreatment Tank	1991	100,000 gal	None

Control Devices

Control Device Identification No.	Control Device	Pollutant	Control Efficiency
C1	Elevated, Non-assisted Flare Rated Capacity of 3,600 scfm	VOCs & VOHAPs	98%
C2	Elevated, Non-assisted Flare Rated Capacity of 2,360 scfm Flare Tip Diameter: 12 inches	VOCs & VOHAPs	98%

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-2590~~A~~B	~~9/10/2018~~ 7/9/2019

f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A., 45CSR13, R13-2590, 4.4.1]

3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.]

3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§30-5.1.c. State-Enforceable only.]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§§30-4.4. *and* 5.1.c.3.D.]

3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]

3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

US EPA:

Section Chief
~~Associate Director~~
~~Office of Air Enforcement and Compliance Assistance (3AP20)~~
U. S. Environmental Protection Agency,
Region III
Enforcement and Compliance Assurance Division Air Section (3ED21)
1650 Arch Street
Philadelphia, PA 19103-2029

c. Operate the collection system with negative pressure at each wellhead except conditions identified under 40 C.F.R. §60.753.b.

d. Operate each interior wellhead in the collection system with a landfill gas temperature less than 55°C and with either nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher value if they show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

e. Collects gas at a sufficient extraction rate;

f. Is designed to minimize off-site migration of subsurface gas;

g. Reduces NMOC by 98 weight percent or for an enclosed combustion device, either reduces NMOC by 98 weight percent or reduces the outlet concentration to less than 20 ppmv, dry as hexane, at 3 percent oxygen;

h. Maintains the methane concentration at the surface of the landfill at less than 500 ppmv above the background level.

[45CSR23, 40 C.F.R. §60.752, and 40 C.F.R. §60.753]

4.1.4. **LFG Collection and Control System Design Plan** - The landfill gas collection and control design plan shall be submitted to the Division of Air Quality within one year after submitting the NMOC emission rate report, reporting an NMOC emission rate which equals or exceeds 50 megagrams per year.

a. If the permittee is required to install a gas collection and control system, the permittee shall apply for a Title V operating permit significant permit revision within 90 days of the date of the approval of the gas collection and control plan

[45CSR23 and 40 C.F.R. §60.757(c)]

4.1.5. The active landfill gas collection system and non-assisted flare identified as C2 shall be installed, operated and maintained in accordance with the following:

a. Flare (C2) Emissions to the atmosphere shall not exceed the following limits listed in Table 4.1.5.a.:

Table 4.1.5.a

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Volatile Organic Compounds (VOC)	0.38	1.65
Carbon Monoxide (CO)	21.95	96.14
Sulfur Dioxide (SO_2)	~~2.35~~ 19.07	~~10.31~~ 83.53
Nitrogen Oxides (NO_x)	4.81	21.07
$PM/PM_{10}/PM_{2.5}$	1.20[1]	5.26
HCL	0.56	2.47

[1]Compliance with this emission limit will ensure compliance with 45CSR§6-4.1.

b. The annual amount of landfill gas to be flared by C2 shall not exceed 1,240.42 MMscf/yr. Compliance shall be demonstrated on a 12-month rolling total.

c. The permittee shall install and maintain a device/system that continuously measures and records the total amount of landfill gas routed to the flare at all times;

d. The flare shall be operated with a flame present at all times while landfill gas is routed to the flare. The presence of a flare pilot light or flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame;

e. The gas collection system and flare shall be designed and installed in accordance with "Good Engineering Practices";

f. The Flare C2 ~~flare~~ shall be operated with no visible emissions, except for periods not to exceed a total of five minutes during any two-consecutive hours.
[45 CSR §6-4.3]

g. The Flare C2 shall not combust landfill gas with a hydrogen sulfide concentration greater than 50 grains per 100 cubic feet of gas (815 ppm by volume).
[45 CSR §10-5.1.]

~~g.~~ h. Compliance with the SO_2 emission limit in Table 4.1.5.a shall be determined using the actual landfill gas flows measured in accordance with Condition 4.2.3 and the actual hydrogen sulfide concentrations measured in accordance with Condition 4.2.4.

[45CSR13, R13-2590, 4.1.1]

4.1.6 **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR §13-5.10., 45CSR13, R13-2590, 4.1.2]

4.2. Monitoring Requirements

4.2.1. For the purpose of determining compliance with the opacity limits of 45CSR6 (Condition 4.1.5.f), visible emission checks of the flare (C2) shall be conducted. The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 C.F.R. Part 60, Appendix A, Method 22 or from the lecture portion of the 40 C.F.R. Part 60, Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source flare for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present.

Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions

If visible emissions are present at a source(s) for three (3) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions. Records of such monitoring shall be maintained in accordance with Condition 3.4.2. of this permit.
[45CSR§30-5.1.c., 45CSR13, R13-2590, 4.2.1]

4.2.2 In order to demonstrate compliance with the continuous flame requirements of 4.1.5.d., the permittee shall monitor the presence or absence of a flame using a thermocouple or any other equivalent device. Records of such monitoring shall be maintained in accordance with Condition 3.4.2. of this permit.
[45CSR13, R13-2590, 4.2.2]

4.2.3. The permittee shall record the total amount of landfill gas routed to C2 on a monthly basis and determine the 12-month rolling total to demonstrate compliance with the limits set forth in 4.1.5.b. and to determine actual emissions except for sulfur dioxide emissions. Records of such monitoring shall be maintained in accordance with Condition 3.4.2. of this permit.
[45 CSR §§10-8.2.c.3., 8.3.a., 8.3.c., 8.3.d., 45CSR13, R13-2590, 4.2.3]

4.2.4. The permittee shall sample and determine the hydrogen sulfide concentration in the landfill gas at least ~~within 180 days after startup of C2 and~~ once every year, which shall mean between 11 and 13 months from the previous sample date that indicated ~~five years thereafter to demonstrate~~ compliance with the ~~concentration limit in 45 CSR §10-5.1.~~ hydrogen sulfide standard of Condition 4.1.5.g. The analysis of the sample shall conform to EPA Test Methods 15 and 16 or other analytical method(s) approved by the Director. Records of such monitoring shall be maintained in accordance with Condition 3.4.2. of this permit.

[45 CSR §10-8.2.c.3., 45CSR13, R13-2590, 4.2.4]

4.2.5. To demonstrate compliance with sulfur dioxide limits in Table 4.1.5.a., the permittee shall determine the sulfur dioxide emitted each calendar month and sum the previous 12-months. Such records shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-2590, 4.2.5]

4.3. Testing Requirements

[Reserved]

4.4. Recordkeeping Requirements

4.4.1. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. These records shall include, but are not limited to:

a. Current maximum design capacity, current amount of refuse in place, and year by year refuse accumulation rates.

b. Description, location, amount, and placement date of all nondegradable refuse including asbestos and demolition refuse placed in landfill gas collection and control.

b. The estimated waste acceptance rate for each year of the five years for which an NMOC emission rate is estimated.

The NMOC emission rate shall be calculated in accordance with the methodology contained in 40 C.F.R. §60.754(a)(1). All data, calculations, sample reports and measurements upon which the estimate is based shall be presented with the report to the Division of Air Quality. The estimate shall be revised at least every five (5) years.
[45CSR23 and 40 C.F.R. §60.757(b)(1)(ii)]

4.5.3. **Revision of 5-year NMOC Report** - If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the Division of Air Quality. The revised estimate shall cover the five year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate and shall be submitted within 180 days of the first exceedance of the estimated waste acceptance rate.
[45CSR23 and 40 C.F.R. §60.757(b)(1)(ii)]

4.5.4. **Closure Report** - The permittee shall submit a closure report to the Division of Air Quality within 30 days of the date the MSW landfill stopped accepting waste.
[45CSR23 and 40 C.F.R. §60.757(d)]

4.5.5 Any exceedances of the allowable visible emission requirement for any emission source discovered during observations using 40 C.F.R. Part 60, Appendix A, Method 22 must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
[45CSR13, R13-2590, 4.5.1]

4.5.6 The permittee shall report the results of hydrogen sulfide analysis that exceeded the standard in Condition 4.1.5.g. to the Director within 5 days of receipt of the analytical results. The report shall include details of the excursion, duration of the excursion (if determined), magnitude of the excursion, cause of excursion and corrective action taken or planned. Records of such report shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-2590, 4.5.2, 45 CSR §10-8.3.b.]

4.6. Compliance Plan

4.6.1. *[Reserved]*